

USSR

UDC 532.593

MYSHKIS, A. D., KOPACHEVSKIY, N. D., TYUPTSOV, A. D.

"Oscillations of a Liquid Under Conditions of Total or Partial Weightlessness"

Tr. V Mezhdunar. konf. po nelineyn. kolebaniyam. T. 3 (Works of the V International Conference on Nonlinear Oscillations. Vol. 3), Kiev, Institute of Mathematics of the Academy of Sciences UkrSSR, 1970, pp 518-524 (from RZh-Mekhanika, No 12, Dec 71, Abstract No 12B732)

Translation: A survey of the results of mathematical studies of small motions of a liquid that were conducted at the Physicotechnical Institute of Low Temperatures of the Academy of Sciences UkrSSR is presented. This work was concerned with the study of the following problems in the dynamics of an incompressible liquid subjected to forces of surface tension: (1) investigation of the stability of the state of rest; (2) investigation of the reserve of stability; (3) the Cauchy problem and the spectral problem of oscillations of an ideal liquid; (4) the Cauchy problem and the spectral problem of oscillations of a viscous liquid; (5) the asymptotic behavior of the oscillation frequencies of an ideal liquid in an axisymmetric vessel; (6) approximate method for calculating free oscillations. N. N. Moiseyev.

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172 018 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--A DYNAMIC PROBLEM OF MECHANICS WITHOUT UNIQUENESS -U-

AUTHOR--(02)-KRASNOSELSKIY, M.A., MYSHKIS, A.D.

COUNTRY OF INFO--USSR

SOURCE--DIFFERENTIAL'NYE URAVNENIYA, VOL 6, APR. 1970, P. 634-643

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--DIFFERENTIAL EQUATION, ELASTICITY, DEGREE OF FREEDOM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1694

STEP NO--UR/0376/70/006/000/0634/0643

CIRC ACCESSION NO--AP0125315

UNCLASSIFIED

272 018

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0125315

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DETAILED ANALYSIS OF A SIMPLE PROBLEM RELATED TO THE DEVELOPMENT OF THE PROCESS OF STABILITY LOSS WITHIN THE FRAMEWORK OF THE CLASSICAL THEORY OF ORDINARY DIFFERENTIAL EQUATIONS. A TWO DIMENSIONAL MECHANICAL ELASTIC SYSTEM WITH A SINGLE DEGREE OF FREEDOM IS CONSIDERED. THE BEHAVIOR OF THE TRAJECTORIES ON THE PHASE PLANE WITHIN A FINITE PERIOD OF TIME IS INVESTIGATED, NOTING THE OCCURRENCE OF BIFURCATION OF THE TRAJECTORIES. CONDITIONS UNDER WHICH NO OTHER SOLUTION CAN BRANCH OFF FROM THE ZERO SOLUTION TO THE PROBLEM ARE PRESENTED.

FACILITY: VORONEZHSKI GOSUDARSTVENNYI

UNIVERSITET, KHARKOV, UKRAINIAN SSR.

UNCLASSIFIED

USSR

UDC: 533.9.082.5

FUGOL', I. Ya., MYSHKIS, D. A., and GRIGORASHCHENKO, O. N.

"Absorption Methods of Measuring Absolute Concentration of Metastable Helium Atoms in a Plasma"

Leningrad, Optika i Spektroskopiya, vol. 31, No. 4, 1971, pp 529-535

Abstract: An important factor in the determination of the kinetics of metastable helium atoms is the measurement of the integral absorption of the radiation from an external source passing through the plasma. This paper computes the full absorption and reabsorption of the 388.9 nm line and the singlet 501.6 nm line for the 4-300° K and the 1-70 mm Hg temperature and pressure intervals respectively. The asymptotes in the limiting cases of small and large optical densities are analyzed. The results of these computations permit obtaining the absolute concentration of the helium metastable atoms in the 2^3S and 2^1S states. The authors note that details of the computations are given in their preliminary papers published in the Trudy PTINT, No. 1, 1968, p 204 and No. 5, 1969, p 50. Curves are plotted for the integral absorption as a function of the optical thickness for He 388.9 nm and for the absorption as a function of the optical thickness for the He 501.6 nm line. The authors thank L. A. Temkin for

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FUGOL', I. Ya. et al, Optika i spektroskopiya, vol. 31, No. 4,
1971, pp 529-535

setting up the program and making the computations on the elec-
tronic computer.

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USSR

UDC: 378.1:681.31

KOZHUKHOV, V. D., Candidate of the Technical Sciences, FROLOV, S.D.,
and MYSHKO, Ye. I., Engineer

"Automatic Subsystem for Controlling Attendance and Grading of
Students in the Technical VUZ Schools"

Kiev, Mekhanizatsiya i Avtomatizatsiya Upravleniya, No 6, 1973,
pp 36-39

Abstract: A description is given of an automated system for controlling study processes in a VUZ subsystem. This system has been in operation since 10 November 1970 in the Kharkov Aviation Institute and since 20 December 1971 in the Kharkov Automobile Highway Institute. The purpose of the subsystem is to acquire and store information regarding the application of the educational process to, and the performance of, each student individually; to process and systematize it; and distribute it to the various departments, deans, directors, and societies in the form of special blanks. Samples of the blanks used are given. The electronic computer BESM-4 is the central equipment of the institution's control equipment. A description of the various cards and blanks and their functions is provided.

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USSR

UDC: 8.74

SIRODZHA, I. B., SALYGA, V. I., MYSHKO, Ye. I., VASILENKO, Yu. A., KARTA-SHOV, L. N., PRYANITSKIY, A. M., KUZ'MINA, O. I.

"Modeling the Process of Teaching Pattern Recognition by the Method of R-Functions With the Use of a Digital Computer"

Probl. bioniki. Resp. mezhved. temat. nauch.-tekhn. sb. (Problems of Bionics. Republic Interdepartmental Thematic Scientific and Technical Collection), 1971, vyp. 7, pp 106-112 (from RZh-Kibernetika, No 4, Apr 72, Abstract No 4V582)

Translation: The paper deals with a mathematical model of instruction whose basis is a developed learning algorithm of pattern recognition distinguished by the use of a fundamentally new procedure of predicative description of arbitrary geometric forms in multidimensional spaces with the aid of R-functions. Authors' abstract.

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USSR

UDC 678:66.018.86

SEMENKO, E. I., MYSHKOVSKIY, V. I., VOBLIKOVA, V. A., and VENDILLO, V. P.

"Study of the Gaseous Products of γ -Radiolysis of Polymers in the Presence of Small Doses of Irradiation"

Moscow, Plasticheskiye Massy, No 5, 1973, pp 30-32

Abstract: A study was made of the gaseous products formed during γ -irradiation by small (2.5 Mrads) doses of certain polymer materials used in the medical industry: high-density polyethylene, methylmetacrylatebutyl acrylate copolymer polymethylmethacrylate, polyvinyl chloride and copolymers of styrene with methylethacrylate, isoprene and divinyl.

From the experimental results presented it can be concluded that by using highly sensitive gas chromatography to analyze the products of radiolysis of certain polymer materials subjected to the effect of sterilizing doses of γ -radiation (2.5 Mrads) it is possible to establish the course of the decomposition processes with the formation of C_1 - C_5 hydrocarbons, CO, and CO_2 .

Broad utilization of ionizing radiation to sterilize medical products made of plastics requires a detailed study of the mechanism of the initial stages of the decomposition processes of polymers on irradiation of them by small doses.

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USSR

M UDC 669.71:539.375

LIKEACHEV, V. A., VLADIMIROVA, G. V., MYSELVAYEV, M. M., and GLEVISKIY, S. S.,
Physicotechnical Institute imeni A. F. Ioffe and Institute of Solid State Physics,
Academy of Sciences USSR

"Aluminum Work Hardening at Temperature Discontinuities in the Process of Creep"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 29, No 6, Jun 73, pp 1280-1287

Abstract: Results are presented of the experimental investigation of increased creep strength of metals resulting from time reduction of temperature in the process of deformation. It is observed that work hardening of metal is clearly manifested only when a considerable density of dislocation loops originates in the boundaries of blocks and near them. It is shown that work hardening involves preliminary deformation of creep, develops in time, and is sensitive to stress and temperature-velocity conditions. The nature of work hardening of metals is discussed. The authors thank V. L. Indenbom, A. N. Orlov, and V. I. Vladimirov for their interest in the work and for discussing the results.

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1/2 034 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--ACTIVATION DISCHARGE OF DISLOCATIONS FROM AN INCLINATION BOUNDARY
UNDER STRESS -U-
AUTHOR--MYSHLYAYEV, H.M. M
COUNTRY OF INFO--USSR
SOURCE--FIZ. TVERD. TELA 1970, 12(3), 860-5
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CRYSTAL DISLOCATION PHENOMENON, ACTIVATION ENERGY, ELASTIC
STRESS, ELASTIC DEFORMATION, NONLINEAR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1987/1970

STEP NO--UR/0181/70/012/003/0860/0865

CIRC ACCESSION NO--AP0105044

UNCLASSIFIED

2/2 034

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0105044

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN AN ELASTICALLY ISOTROPIC MEDIUM IN THE LINEAR STRAIN APPROXN., THE THERMALLY ACTIVATED EMERGENCE WAS EXAMD. OF DISLOCATIONS DURING STRESS FROM EQUIL. AND DEFORMED, VERTICALLY INFINITE SERIES OF EDGE DISLOCATIONS OF THE SAME SIGN EQUIDISTANT FROM EACH OTHER. IN BOTH CASES, CONFIGURATIONS OF THE EMERGING DISLOCATION IN POSITIONS OF STABLE AND UNSTABLE EQUIL. AND THE ACTIVATION ENERGY OF THE PROCESS WERE OBTAINED AS FUNCTION OF THE MAGNITUDE OF THE ACTING STRESS. THE FORM OF THE EMERGING DISLOCATION DEPENDS SHARPLY ON THE STRESS; AT LOW STRESSES, ELONGATED PORTIONS EMERGE FROM THE SERIES, THE LENGTH OF WHICH EXCEEDS L THE DISTANCE BETWEEN THE DISLOCATIONS IN THE SERIES. AT HIGH STRESSES ONLY SHORT SECTIONS ARE ACTIVATED, WITH A LENGTH OF SEVERAL L . THE ACTIVATION ENERGY OF THE PROCESS IS RELATED TO THE STRESS BY A NONLINEAR LAW.

FACILITY: INST. FIZ. TVERD. TELA, CHERNOGOLOVKA, USSR.

UNCLASSIFIED

1/2 025 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--PECULIARITIES OF THE FORMATION OF WELDS IN WELDING THE STRUCTURES
FABRICATED FROM AMG6 ALLOY -U-
AUTHOR-(U2)-MYSKOVA, A.P., NOISEYENKO, I.G. *m*
COUNTRY OF INFO--USSR
SOURCE--MOSCOW, SVAROCHNOYE, PROIZVODSTVO, NO 3, 1970, P 27
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--ALUMINUM MAGNESIUM ALLOY, STRESS CONCENTRATION, BIBLIOGRAPHY,
ALUMINUM WELDING/(U)AMG6 ALUMINUM MAGNESIUM ALLOY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1307 STEP NO--UR/0135/70/000/003/0027/0027
CIRC ACCESSION NO--AP0123266
UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0123200
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. IT HAS BEEN ESTABLISHED THAT IN WELDING THE STRUCTURES FABRICATED FROM AM66 ALLOY THERE OCCUR ON THE REVERSE OF THE WELD TECHNOLOGICAL STRESS CONCENTRATORS WHICH DECREASE THE WELD STRENGTH BY 15-20PERCENT. A POSSIBILITY WAS SHOWN OF THE INCREASE OF THE STABILITY OF STRENGTH INDICES BY IMPROVING THE FORMATION OF THE PASSAGE FROM THE ROOT OF WELD TO THE BASE METAL.

UNCLASSIFIED

USSR

UDC: 621.316.174:625.21

BESSONOV, K. S., DUDNICHENKO, A. I., GAMBURG, B. M., KITUSHIN, V. G., ~~MYS-~~
~~LIN, D. A.~~ Siberian Department of the All-Union State Design and Planning
and Scientific Research Institute "Energoset'proyekt"

"A Portable Substation"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 9, Mar 72, Author's Certificate No 331464, Division H, filed 19 Jan 68,
published 7 Feb 72, p 174

Translation: This Author's Certificate introduces: 1. A 220/110/6 kV portable substation containing an open 220 kV distribution device, an autotransformer connected by the 220 kV line to the supply network transformer, an open 110 kV distribution device and a self-contained 6 kV distribution device. As a distinguishing feature of the patent, the device is made more compact and portable by making the autotransformer of the incomplete-phase type and connecting it to the supply network by two phase conductors of the 220 kV line and connecting the neutral of the supply network transformer to the ungrounded neutral of the autotransformer, the neutrals being connected by an ungrounded cable of the 200 kV line. 2. A modification of this substation in which voltage asymmetry at consumer points is eliminated by connecting a booster transformer in the circuit break.

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MYSLIN, V.A.



DEPARTMENT OF THE NAVY
NAVAL INTELLIGENCE SUPPORT CENTER
TRANSLATION DIVISION
4301 SULLY ROAD
WASHINGTON, D.C. 20390

NAV/NISC 17XAN-3447-73

a 20/4
4-051/1958
60

CLASSIFICATION: UNCLASSIFIED

APPROVED FOR PUBLIC RELEASE, DISTRIBUTION UNLIMITED

TITLE:

Measuring the Oscillation Relaxation Time of the
CO₂ Level of CO₂ molecules in the temperature
interval of 300° - 600°K

AUTHOR(S):

Intermittent, vremenno kolebatel'nyy relaksatsionnyy
CO₂ molekuly CO₂ v interval'noy temperatury 300-600°K
Belyukov, A.S.; Konyukhov, V.K.; Lyubomirsky, A.I.;
Myslin, V.A.; Serikov, R.E. and Tishkov, Ye.B.

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PAGES:

Zhurnal prikladnoy spektroskopii, No. 2, 1972
Pages 249-252

ORIGINAL LANGUAGE: Russian

TRANSLATOR:

CRM

NISC TRANSLATION NO. 3447

APPROVED P.T.K.

DATE 20 June 1973

USSR

UDC 591.18

MYSLORODSKIY, M. S. and KUZNETSOVA, G. D., Institute of Higher Nervous Activity, Academy of Sciences USSR

"Degree of Indifference of a Conditioned Stimulus: Light Self-Stimulation"

Moscow, Doklady Akademii Nauk SSSR, No 4, 1971, pp 978-980

Abstract: Rats were placed in a chamber in one wall of which was a pedal that produced a flash of light when pressed. After a few attempts the animals repeatedly pressed the pedal from 20 to 150 times an hour and between flashes they would lie on or near the pedal. When the light was disconnected, the animals ceased to press the pedal and would occupy various parts of the chamber. Intraperitoneal injection of amphetamine sulfate stimulated the animals and at first resulted in their pressing the pedal somewhat less often than usual. But 5 to 20 minutes later the rate of self-stimulation increased sharply and sometimes 20 or more times greater than the original level. Thus light, like electric current, is not a neutral stimulus. In another series of experiments, rats were given the choice of two chambers in a labyrinth, one containing a blinking light. Most of the animals displayed a clear-cut preference for the illuminated chamber until the frequency of flashes was increased to 20 per sec, whereupon all the animals immediately left the chamber.

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1/2 028
TITLE--SOME IMPLICATIONS OF THE ANOMALOUS EXCITABILITY CYCLE OF THE VISUAL
CORTEX IN RABBITS -U-
AUTHOR--MYSLOBODSKIY, M.S. *M.*
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL VYSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 3, PP
602-611
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--VISUAL PERCEPTION, SENSORY PHYSIOLOGY, BRAIN, SURGERY,
ELECTROPHYSIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1997/1914

STEP NO--IR/0247/70/020/003/0602/0611

CIRC ACCESSION NO--AP0120568

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT79

2/2 028

CIRC ACCESSION NO--AP0120568

ABSTRACT/EXTRACT--(U) GP-O-

ABSTRACT. PECULIARITIES OF RESPONSES OF THE VISUAL CORTICAL AREA TO A PAIRED PHOTIC STIMULUS WERE STUDIED IN ACUTE AND CHRONIC EXPERIMENTS ON ALERT RABBITS WITH LOCAL (ELECTROLYTIC) AND EXTENSIVE ABLATIONS (PERFORMED BY MEANS OF AN ENCEPHALOTOME) IN THE ROSTRAL PART OF THE BRAIN STEM. THE CORTICAL RESPONSES WERE ANALYSED BY A SUMMATOR DESIGNED ON THE BASIS OF AN AMPLITUDE ANALYSER. CHANGES IN THE EXCITABILITY CYCLE WERE MANIFESTED IN A DRASTIC DECREASE OR COMPLETE SUPPRESSION OF THE RESPONSE, IF THE SECOND STIMULUS ACTED ON THE FOREFRONT OF THE PRECEDING SLOW NEGATIVE WAVE (SNW), AND IN A DECREASE OR COMPLETE ABSENCE OF REDUCTION OF TEMPORAL SNW CHARACTERISTICS OF THE RESPONSE TO A TEST STIMULUS (DISTURBANCE OF THE ESCAPE PHENOMENON). AN ASSUMPTION HAS BEEN MADE ON THE POSSIBLE GENESIS OF THE PHENOMENA, AND THEIR ROLE IN THE ORGANIZATION OF PAROXYSMAL RESPONSES OF THE VISUAL CORTIX TO A FLICKERING LIGHT HAS BEEN DISCUSSED.

FACILITY:
INSTITUTE OF HIGHER NERVOUS ACTIVITY AND NEUROPHYSIOLOGY, USSR ACADEMY OF SCIENCES, MOSCOW.

UNCLASSIFIED

72 025 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--SOME CHARACTERISTICS OF SENSORY AFTERDISCHARGE OF HUMAN BRAIN TO
PHOTIC STIMULATION -U-
AUTHOR--KUDINOVA, M.P., MYSLOBODSKIY, M.S.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL VYSSHEY. NERVENNOY DEYATEL'NOSTI, 1970, VOL 20, NR 1, PP
89-94
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BRAIN, SENSORY PHYSIOLOGY, SLEEP, EYE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
COPY REEL/FRAE--1982/0811

STEP NO--UR/0247/70/020/001/0089/0094

IRC ACCESSION NO--AP0052247

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--11SEP70

IRC ACCESSION NO--AP0052247

8STRACT/EXTRACT--(U) GP-0- ABSTRACT. BY MEANS OF AVERAGING EVOKED POTENTIALS A STUDY WAS MADE ON HEALTHY SUBJECTS OF THE TOPOGRAPHY OF THE SENSORY ALPHA AFTERDISCHARGE AND ITS DYNAMICS CAUSED BY CHANGES IN THE DIRECTION OF ATTENTION AND BY FALLING ASLEEP. IT HAS BEEN SHOWN THAT THE AMPLITUDE OF THE SENSORY AFTERDISCHARGE DEPENDS ON THE POSITION OF THE EYES AND THAT ITS EXALTATION DURING VOLUNTARY MOVEMENTS IS RELATED TO EXCURSIONS OF THE EYES. THE SIGNIFICANCE OF THE ALPHA DISCHARGE IS DISCUSSED AS AN INDICATOR OF DIRECTION OF ATTENTION AND THE STATE OF CONSCIOUSNESS.

Acoustics

UDC: 534

USSR

SVETLICHNYI, I. B., MARGOLIN, A. D., KUZNETSOV, A. A., FOKHIL, P. F.,
MYSOV, V. G.

"Direct Method of Measuring the Acoustic Conduction of the Burning Surface
of Powder"

Fiz. aerodispers. sistem. Mezhd. nauch. sb. (Physics of Aerodisperse
Systems. Interdepartmental Scientific Collection), 1971, vyp. 4, pp 84-92
(from RZh-Fizika, No 6, Jun 72, Abstract No 6Zh524)

Translation: A direct method is developed for measuring acoustic conduc-
tivity of a burning surface as the ratio of the change in the velocity of
outflow of combustion products from the surface to the pressure in the
acoustic wave at the burning surface. The pressure is measured by a piezo-
electric transducer, and the acoustic velocity at the burning surface is
determined by an electromagnetic flowmeter system with transverse magnetic
field in a tube of circular cross section with insulated walls. The high-
temperature ionized products of gunpowder combustion acted as the conduct-
ing medium. The test specimen of powder was placed in the tube together
with a noise emitter which generated plane longitudinal waves. Measurements

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USSR

SVETLICHNYY, I. B. et al., Fiz. aerodispers. sistem Mezhved. nauch. sb., 1971, vyp. 4, pp 84-92

could be made both at fixed and variable pressures and signal frequencies. A theory of the method is developed, and a theoretical analysis and experimental study are made of the effect of various factors on measurement results. The dimensionless acoustic conduction of the burning surface of nitroglycerin powders is measured, and satisfactory agreement with the results of measurements by other methods is obtained. Authors' abstract.

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Organometallic Compounds

USSR

UDC 542.91:547.1'119:547.412.732

KOPAYEVICH, Yu. L., VELEN'KIY, G. G., MYSOV, Ye. I., GERMAN, L. S., and
KNUNYANTS, I. L., Institute of Element-Organic Compounds, Academy of
Sciences USSR

"Derivatives of Bis(pentafluoroethyl)arsenous Acid"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, 1, Jan 73,
pp 121-122

Abstract: The reaction of ethanol with $(C_2F_5)_2AsF$ (I) results in the formation of small amounts of the corresponding ester. In the presence of SiO_2 , however, the yield of $(C_2F_5)_2AsOC_2H_5$ is significantly increased. The hydrolysis of I leads to the formation of $(C_2F_5)_2AsOAs(C_2H_5)_2$; and the subsequent reaction with diethylamine to $(C_2F_5)_2AsN(C_2H_5)_2$. Reaction of (I) with phenylmagnesium bromide leads to the formation of $(C_2H_5)_2AsC_6H_5$. Syntheses, elemental composition, and mass spectrometric and NMR data are given for the compounds generated.

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MATHEMATICS

Differential & Integral Equations

USSR

UDC 517.913

MYTROPOL'S'KYY, YU. O., Academician of the Academy of Sciences Ukrainian SSR,
and LOPATIN, O. K., Institute of Mathematics, Academy of Sciences Ukrainian
SSR

"On the Decomposition of Nonlinear Systems"

Kiev, Dopovidi Akademii Nauk Ukrain's'koi RSR, Seriya A -- Fizyko-Tekhnichni ta Matematychni Nauky, No 12, Dec 72, pp 1078-1082

Abstract: The article considers the question of the reduction of a system of nonlinear, ordinary differential equations of the form

[illegible]

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USSR

MYTROPOL'S'KYY, YU. O., and IOPATIN, O. K., Dopovidi Akademii Nauk Ukrain-s'koi RSR, Seriya A -- Fizyko-Tekhnichni ta Matematychni Nauky, No 12, Dec 72, pp 1078-1082

where $\alpha_{ij}(a_1, \dots, a_m, t), \dots, \alpha_{nj}(a_1, \dots, a_m, t)$ are continuous functions of the parameters a_1, \dots, a_m and time t in a certain region, $\varphi_{j1}, \dots, \varphi_{jn_1}$ ($j=1, \dots, n_1$) are holomorphic functions in a certain region Ψ . The problem is to find the conditions which make it possible, depending on the form of system (1), to establish when there are transformations of the variables which turn to Ψ ; depend only on the variables x_1, \dots, x_n ; and which reduce (1) to a certain equivalent system which is of the same order but decomposes into a series of independent subsystems of new variables. The article essentially uses the classic results of Lie theory and the theory of linear partial differential equations of first order.

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USSR

UDC: 519.2

MYTUS, L.

"Differential Equations With Free Boundaries in Problems of Stochastic Control"

Izv. AN EstSSR. Fiz., mat., 1973, 22, No 1, pp 37-45 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V216 by the author)

Translation: A study is made of the question of reducing problems of stochastic control to solution of differential equations with free boundaries. In the case of a finite number of values of the controlling action, such a reduction is possible for system which are linear with respect to state, and also for nonlinear systems with an integral loss function. In the case of a limited maximum value of the controlling function, the reduction is effected in the case of terminal control of the linear system. An example is given of solution of differential equations with free boundaries which arise in problems of stochastic control.

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1/2 027 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--NEAR ORDER IN REFRACTORY COMPOUNDS --U-
AUTHOR--(02)-UMANSKIY, YA.S., MYULLER, A.S.
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., CHERN. MET. 1970, 13(1), 128-31
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--REFRACTORY MATERIAL, CRYSTAL STRUCTURE, TITANIUM CARBIDE,
TUNGSTEN CARBIDE, NIOBIUM CARBIDE, VANADIUM COMPOUND, TANTALUM ALLOY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1988/0961 STEP NO--UR/0148/70/013/001/0128/0131
CIRC ACCESSION NO--AT0105830
UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AT0105830

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SMALL ANGLE DIFFUSION SCATTERING
INTENSITIES OF TI-TA, TIC-TAC, V-W, VC-WC, TIC-NBC, V-NB, VC-NBC, AND
TIC-WC ALLOYS ARE COMPARED AND DISCUSSED. HIDEO KUROE

89

UNCLASSIFIED

USSR

UDC 620.171.5:625

MYULLER, KH.

"Use of X-Ray Micrography in the Solution of Real Transport Problems"

Tr. Mosk. in-ta inzh. zh.-d. transp. (Works of the Moscow Institute of Railway Engineers), 1970, vyp 311, pp 137-145 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 8, Aug 70, Abstract No 8.32.356)

Translation: The possibilities are considered of the application of X-ray measurements for the determination of material tension at the surface of structure, caused by technological and manufacturing shortcomings and which remain after the removal of a load. 6 ill.

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USSR

UDC: 669.35'11'71:620.18

IVANOVA, S. I., MYULLER, N. N., PINCHUK, P. A.

"Distribution of Chromium, Manganese and Zirconium in Copper-Iron-Aluminum Alloys"

Moscow, Tsvetnyye Metally, No 12, Dec 73, pp 53-54.

Abstract: X-ray spectral microanalysis is used to establish that the copper matrix in cast Cu-Fe-Al alloys contains 7 to 12% Al, 1.6-3.0% Fe and approximately 1/2 of the manganese introduced to the alloy. In alloys with chromium, the copper matrix includes sections rich in chromium, but almost all the chromium is located in the iron phase, containing from 1.5 to 14.4% Cu and 10.3 to 13.0% Al.

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1/2 011 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--REINFORCED CONCRETE SHAFT TIE BEAMS PREPARED FROM HIGH STRENGTH
MATERIALS -U-
AUTHOR--(02)-MYURBERG, V.K., MIKHALEV, V.G. *M*
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., GORN. ZH. 1970, 13(2), 33-7
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY, MECH., IND.,
CIVIL AND MARINE ENGR
TOPIC TAGS--REINFORCED CONCRETE, BLAST FURNACE SLAG, MINING ENGINEERING,
CONSTRUCTION MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/1025

STEP NO--UR/0150/70/013/002/0033/0037

CIRC ACCESSION NO--AT0119892

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0119892

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CROSS SECTION OF THE TIE BEAM IS U SHAPED. IN THE LONGITUDINAL RIBS THE REINFORCEMENT WITH PERIODIC PROFILE 5 MM IN DIAM. AND A STRENGTH OF 15,000 KG PER CM PRIME3 IS PLACED. ITS LENGTH VARIED FROM 0.5 TO 1 M, THE CONCRETE VOL. IS 3.3-6.6 L., THE WT. 7.8-15.6 KG. THE METAL CONSUMPTION 0.15-0.3 KG. THE CONCRETE CONSISTED OF GROUND GRANULATED METALLURGICAL BLAST FURNACE SLAG, WATER GLASS, NAOH WITH A SP. GR. OF 1.42-1.45, FINE SAND WITH A SIZE MODULE OF 2.8 CONTG. 3.5PERCENT DUSTLIKE AND CLAYEY PARTICLES, AGGREGATE WITH A SP. GR. OF 2.8 CONTG. 2.8PERCENT OF DUSTLIKE AND CLAYEY PARTICLES. THE OPTIMUM WT. RATIO OF SAND AND AGGREGATE WAS 1:1.83, FOR VOID FRACTION OF 0.26. THE OPTIMUM GLASS:SLAG RATIO WAS 0.325-0.365. THE COMPN. OF THE CONCRETE WAS GROUND GRANULATED SLAG 500-600, WATER GLASS 140-5, NAOH 18.5-20, SAND 550-650, AGGREGATE 1100-1300, WATER 40-5 KG. THE TIE BEAMS WERE MANUFD. IN INDIVIDUAL STEEL MOLDS. FOR SPANS OF 700-950 MM, FAILURE OCCURRED IN THE STRETCHED ZONE OWING TO BREAK IN THE REINFORCEMENT. TIE BEAMS WITH A SPAN OF 450 MM ARE DESTROYED ON THE SUPPORTS OWING TO THE APPEARANCE OF CRACKS. THE CRIT. TRANSVERSAL FORCE OF CONCRETE OF TYPE 500 IS 1.8 TONS. THE TIE BEAMS ARE RECOMMENDED FOR HEAVY DUTY UNDER MINING CONDITIONS. FACILITY: KARAGAND. POLITEKH. INST., KARAGANDA, USSR.

UNCLASSIFIED

USSR

UDC 621.357:621.79.027

MYZDRIKOV, A. M., AMIRKHANOVA, N. A., ZHURAVSKIY, A. K.

"Selection of Electrolytes for Electrochemical Machining"

V sb. Novoye v elektrofiz. i elektrokhim. obrabotke materialov (What's New in Electrophysical and Electrochemical Treatment of Materials -- collection of works), Leningrad, Mashinostroyeniye Press, 1972, pp 21-23 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12L300)

Translation: The potentiostatic method of studying the anode behavior of EI-961 alloy in solutions of different composition is used to select the optimal composition of the electrolyte for electrochemical dimensional machining. This is an aqueous solution of 15% NaCl and 5% NaNO₃.

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USSR

UDC: 537.312.62

SAVITSKIY, Ye. M., BARON, V. V., MYZENKOVA, L. F., MARTYNOVA, L. F.

"A Study of Magnetization of Niobium and Zirconium Single Crystals"

Moscow, Sverkhprovodyashchiye splavy i soyedin.--sbornik (Superconductive Alloys and Compounds--collection of works), "Nauka," 1972, pp 122-125 (from RZh-Radiotekhnika, No 12, Dec 72, abstract No 12D559 [résumé])

Translation: Curves are plotted for the magnetization of single crystal specimens of niobium with 5% zirconium having various crystallographic axial orientations (at 4.2 K). The results show anisotropy of the critical magnetic fields, the residual magnetic moment and the maximum "diamagnetic" moment. Three illustrations, bibliography of 13 titles.

1/1

USSR

UDC: 537.312.62

SAVITSKIY, Ye. M., MYZENKOVA, L. F., BARON, V. V., MARTYNOVA, L. F.

"Investigation of the Structure and Superconducting Properties of Single Crystals of Niobium With 5 and 10 Percent Zirconium"

V sb. Probl. sverkhprovodyashch. materialov (Problems of Superconducting Materials--collection of works), Moscow, "Nauka", 1970, pp 173-177 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D552)

Translation: The authors study the structure of single crystals of alloys of niobium with five and ten percent by weight of zirconium made by the method of electron-beam zone melting. Data are given on the distribution of zirconium and introduced impurities with respect to the length of the single-crystal bar. The temperature of transition to the superconducting state is measured. For a niobium alloy with 5 percent zirconium, the transition temperature is 10°K, while the corresponding temperature is 10.5°K for an alloy of niobium with 10 percent zirconium. Magnetization curves are plotted for specimens with various crystallographic orientations. Five illustrations, one table, bibliography of six titles. Resumé.

1/1

143

USSR

UDC 669.018.045+537.312.62

SAVITSKIY, Ye. M., MYZENKOVA, L. F., BARON, V. V., and MARTYNOVA, L. F.

"Study of Structure and Superconducting Properties of Single Crystals of Niobium With 5 and 10% Zirconium"

Problemy Sverkhprovodyashchikh Materialov [Problems of Superconducting Materials--Collection of Works], Moscow, Nauka Press, 1970, pages 148-155

Translation: The structure of single crystals of the alloys of niobium with 5 and 10 wt.% Zr produced by the method of cathode ray zone melting is studied. Data are presented on the distribution of zirconium and interstitial impurities over the length of a monocrystalline bar. The transition temperature is measured. For the alloy niobium-5% Zr, $T_c = 10^\circ\text{K}$; for the alloy niobium-10% Zr, $T_c = 10.5^\circ\text{K}$. Magnetization curves of specimens with various crystallographic orientation are measures.

5 figures; 1 table; 6 biblio. refs.

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- 51 -

MYZENKOVA, L.F.

Technical
Science

ALLOYS OF RARE METALS WITH SPECIAL PHYSICAL PROPERTIES

(Conference in Moscow)

Participate by Candidate of Technical Sciences L.F. Myzenkova, Institute of Rare Metals, Academy of Sciences of the USSR, Moscow, U.S.S.R.

0725, 8402-2
26 NOV 71

The development of new branches of technology of rare metal alloys is one of the most important tasks of modern metallurgy. The development of new alloys with special properties is a very important task of modern metallurgy. The development of new alloys with special properties is a very important task of modern metallurgy. The development of new alloys with special properties is a very important task of modern metallurgy.

An All-Union conference held in the Institute of Rare Metals, Academy of Sciences of the USSR, Moscow, U.S.S.R., in 1970, devoted to the comprehensive study of problems relating to the development of rare metal alloys with special properties. The results of the conference are presented in this report. The report is devoted to the development of rare metal alloys with special properties. The report is devoted to the development of rare metal alloys with special properties. The report is devoted to the development of rare metal alloys with special properties.

USSR

UDC 669.018.52:620.18

SAVITSKIY, Ye. M., BARON, V. V., MYZENKOVA, L. F., Editors

"Superconducting Alloys and Compounds. Works of the Sixth All-Union Conference on the Problem of Superconducting Materials"

Sverkhprovodyashchiye Splavy i Soyedineniya. Trudy VI Vsesoyuznogo Sov. po Probleme Sverkh. Materialov. [English Version Above], Nauka Press, Moscow, 1972.

Translation of Foreword: The articles presented in this collection were read at the VI Annual All-Union Conference on Metal Science, Physical Chemistry and Metal Physics of Superconductors, held in May of 1969 at the Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences, USSR. Fifty-five reports were read at the conference, some of which are published in this collection.

The problem of superconducting materials, their investigation, the development of products made of superconductors, their application continues to attract great attention of researchers and designers working in various areas of new technology. Furthermore, interest in this problem is continually growing, and some of the materials developed are already in use in instruments and devices operating at helium temperatures.

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USSR

SAVITSKIY, Ye. M., BARON, V. V., MYZENKOVA, L. F., Sverkhprovodyashchiye Splavy i Soyedineniya. Trudy VI Vsesoyuznogo Sov. po Probleme Sverkh. Materialov, Nauka Press, Moscow, 1972.

Recently, the literature has contained an increasing number of works on the physical and chemical analysis and metal physics of superconductors. Physical-chemical analysis allows the relationship of superconducting properties to chemical composition and structure to be established. The theme of the reports read indicates the increased depth of scientific research work in these areas. In addition to the classical trends -- study of the structure of superconducting binary and more complex state diagrams and their properties -- works have been developed on the use of methods of prediction and calculation of the properties of superconducting alloys and compounds with computers, as well as the study of the heat capacity and heat conductivity of superconducting alloys. Studies of the electronic characteristics of superconducting materials and the study of the influence of high cooling rates and hydrostatic pressure on the parameters of superconductivity are continuing. This book turns its attention to methods of stabilization of superconducting cable, new methodological developments and the design of solenoids.

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USSR

SAVITSKIY, Ye. M., BARON, V. V., MYZENKOVA, L. F., Sverkhprovodyashchiye Splavy i Soyedineniya. Trudy VI Vsesoyuznogo Sov. po Probleme Sverkh. Materialov, Nauka Press, Moscow, 1972.

This book is designed for researchers and practical workers -- metals scientists and metal physicists, plant, institute and design bureau specialists studying, producing and applying superconducting alloys and compounds.

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A. I. Golovashkin, I. S. Levchenko, G. P. Motulevich. Electronic Characteristics of Sputtered Alloys of Vanadium with Gallium	20
V. G. Kukharchuk, A. I. Moyseyev, T. A. Ugol'nikova. Production of Diffusion Layers of the Compound V_3Ga on Vanadium Wire	29
Ye. M. Savitskiy, Yu. V. Yefimov. Structure and Properties of Alloys in the System $V_3Si-V_3Ga-V_3Al$	34

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USSR

UDC 669.293.5.296.548.55.620.186.537.312.62

SAVITSKIYY, Ye. M., MYZENKOVA, L. F., BARON, V. V., MARTYNOVA, L. F.

"Study of the Structure and Superconducting Properties of Niobium Single Crystals with 5 and 10% Zirconium"

Probl. Sverkhprovodyashch. Materialov [Problems of Superconducting Materials -- Collection of Works], Moscow, Nauka Press, 1970, pp. 148-155. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 1784 by the authors).

Translation: The structure of single crystals of the alloys of Nb with 5 and 10% Zr produced by the method of cathode-ray zone melting is studied. Data are presented on the distribution of Zr and interstitial impurities through the length of a bar of the single crystal. The transition temperature T_c is measured. For the alloy Nb-5% Zr, $T_c=10^\circ\text{K}$, for the alloy Nb-10% Zr, 10.5°K . Magnetization curves of specimens with various crystallographic orientation are measured. 5 figs; 1 table, 6 biblio refs.

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UDC 621.384.664

USSR

GALYAYEV, N. A., GOLOVINA, N. I., GRACHEV, M. I., GRIDASOV, V. I., GUBRIYENKO, K. I., YEREMENKO, Ye. V., ZAPOL'SKIY, V. N., ZELENOV, B. A., KOTOV, V. I., KUZNETSOV, V. S., MERKER, E. A., MYZNIKOV, K. P., PUCHUGIN, V. A., PRILEPIN, A. A., SELEZNEV, V. S., SEREBRYAKOV, B. A., KHODYREV, Yu. S., and CHEPEGIN, V. N.

"Proton Beam With an Impulse of Up to 70 GeV/s Elastically Dispersed Inside a Target"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972, pp 1437-1445

Abstract: This paper discusses the operation of a channel built into the French liquid-hydrogen Mirabelle chamber for the accelerator of the Institute of High-Energy Physics (IFVE). The function of the channel is to form pure beams of pi and k mesons, and antiprotons, in a broad range of impulse magnitudes under the action of a high-frequency separator. The secondary particles are generated on the inside of a target placed in the path of a proton beam diverted from the accelerator with an energy of 70 GeV. By using a fast system for aiming the proton beam at the target, together with a kicker magnet in the channel, the required number of particles passing through the chamber can be provided. The optical system of the channel is described with the

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USSR

GALYAYEV, N. A., et al., Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972, pp 1437-1445

aid of diagrams of two possible variants; the beam aiming system and the particle dosage for the bubble chamber are also explained. The authors thank R. M. Sulyayev, P. F. Yermolov, A. M. Moiseyev, M. I. Solov'yev, I. A. Danil'chenko, Ye. A. Parshin, V. M. Kolesnik, A. N. Aleyev, V. D. Rudko, and V. M. Gorshkov for their assistance.

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- 41 -

AA0044648

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

2/70

238191 INSTRUMENT FOR INVESTIGATING PIEZOELECTRIC
CONVERTER has been improved by making the
carrier of the tested sample (3) as a yoke. The
vertical movements of the carrier are provided by
a screw (14) and the mounting (18) of the sample
can be adjusted in the horizontal plane by a
screw (19). Both position adjusting screws (14 &
19) have their locking arrangements (20). A mirror
(5) from the optical part of the instrument is
mounted by a spring (4) on the free end of the
sample.

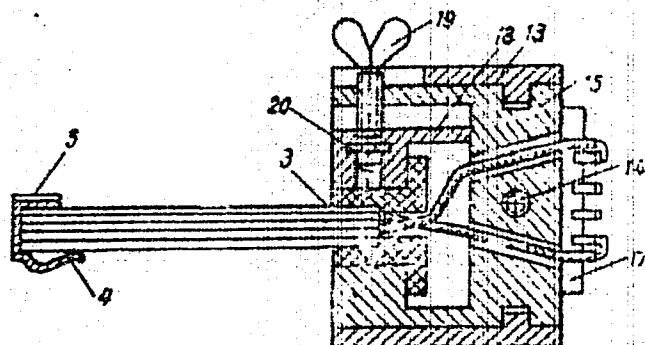
27.10.65 as 1034534/18-10.V.N.MYZNIKOV et al
(3.7.69) Bul 9/20.2.69. Class 42k. Int.Cl.G 011.

AUTHORS: Myznikov, V. N.; Mamedov, V. I.; Likhterov, V. M.

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AA0044648



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jc

USSR

MZAU, L. YE.

"The Minimum Code Distance of One Class of Subcodes of the Reed-Solomon Codes"

Probl. Peredachi Inform. [Problems of Information Transmission], 1973, 9, No 2, pp 104-106 (Translated from Referativnyy Zhurnal Kibernetika, No 9, 1973, Abstract No 9V482)

Translation: The Reed-Solomon code (RS-code), generated by power m polynomials over a Galois field $GF(2^t)$ has, as we know, minimum code distance $d = 2^t - m - 1$ and is capable of correcting up to $[(2^t - m - 2)/2]$ errors in the field $GF(2^t)$. RS-codes are used primarily for correction of batches of errors. Little is known concerning the correction of independent random errors by these codes. Since an error in any position of a code word causes an error in an entire block of length 2^t , that is an error in the corresponding element of field $GF(2^t)$, the Reed-Solomon theory indicates only that this code corrects at least $[(2^t - m - 2)/2]$ errors and, therefore, has code distance $\geq 2^t - m - 1$.

This work produces two estimates for the minimum code distance of subcodes of RS-codes, showing that at low rates, these codes correct more independent random binary errors than is guaranteed by the Reed-Solomon estimate.

From the introduction

1/1

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1/21 032 UNCLASSIFIED PROCESSING DATE--020011
TITLE--CORRELATION OF THE BEHAVIOR OF RIGID CHAIN POLYMERS WITH THEIR
STRUCTURE. AROMATIC POLYBENZOXAZOLES CONTAINING SEVERAL OXYGEN OR SULFUR
AUTHOR--(05)--YAKUBOVICH, V.S., ASKADSKIY, A.A., SHALYGIN, G.F., MALINSKIY,
YU.M., KZHELSKIY, A.I.
COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN.. SER. A 1970, 12(3) 656-62

DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYMER STRUCTURE, POLYCONDENSATION, BENZENE DERIVATIVE,
HETEROCYCLIC OXYGEN COMPOUND, HETEROCYCLIC NITROGEN COMPOUND, ORGANIC
AZOLE COMPOUND, POLYAMIDE COMPOUND, SULFONE, ELASTICITY, TENSILE
STRENGTH, ELONGATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/0297

STEP NO--UR/0459/70/012/003/0656/0662

CIRC ACCESSION NO--AP0111491

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--02OCT70

272 032
CIRC ACCESSION NO--AP0111491
ABSTRACT/EXTRACT--(U) CP-0-

ABSTRACT. THE LOW TEMP. POLYCONDENSATION OF 3,3 PRIME, DIHYDROXYBENZIDINE AND OF 4,4 PRIME, DIHYDROXY, 3,3 PRIME, DIAMINODIPHENYL SULFONE WAS CARRIED OUT WITH P, (P, CLCOC SUB6 H SUB4 S) SUB2 C SUB6 H SUB4, AND (P, CLCOC SUB6 H SUB4 S) SUB2 TO GIVE POLYAMIDES (II). SUBSEQUENT DEHYDRATION OF I GAVE POLYBENZOXAZOLES (III, WHERE R IS DERIVED FROM THE DIACID CHLORIDE AND R PRIME IS DERIVED FROM THE DIAMINE). THE PRESENCE OF O, S, OR SO SUB2 BRIDGES IN II INCREASES THE TEMP. RANGE IN WHICH II RETAIN THEIR ELASTICITY, INCREASES THEIR TENSILE STRENGTH AT BREAK AND ELONGATION AT BREAK.

UNCLASSIFIED

1/2 020 UNCLASSIFIED
TITLE--HEAT RESISTANCE OF POLYMERS -U-

PROCESSING DATE--27NOV70

AUTHOR--(03)-SLONIMSKIY, G.L., ASKADSKIY, A.A., MZHELSKIY, A.I.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN. SER. A 1970, 12(5), 1161-79

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CHEMICAL STABILITY, MATHEMATIC EXPRESSION, HEAT RESISTANT
PLASTIC, THERMAL STABILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3006/1262

STEP NO--UR/0459/70/012/005/1161/1179

CIRC ACCESSION NO--AP0134936

UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--27NOV70
CIRC ACCESSION NO--AP0134936
ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE HEAT RESISTANCE OF POLYMERS IS
DISCUSSED IN QUANT. MATH. TERMS. THE SHAPE CONSTANCY, STRESS
DISTRIBUTION, AND STRESS PRESERVATION ARE THE MAIN STABILITY PARAMETERS.
EQUATIONS WERE DEDUCED WHICH EXPRESS THE RELATION BETWEEN THESE
PARAMETERS AND TEMP. FACILITY: INST. ELEMENTDORG. SOEDIN.,
MOSCOW, USSR.

UNCLASSIFIED

Acc. Nr.

AP0048827

Abstracting Service:
CHEMICAL ABST.

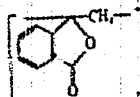
5-76

Ref. Code

UR0459

3

90903k Synthesis and behavior of poly(methylenephthal-
ide). Vinogradova, S. V.; Selazkin, S. N.; Korshak, V. V.; Chel-
idze, G. Sh.; Slonimskii, G. L.; Askadskii, A. A.; Mizheiskii, A. I.
(Inst. Elementorg. Soedin., Moscow, USSR). ~~Unpublished~~
diz., Ser. A 1970, (211), 205-13 (Russ.). The title polymer (I) was
prepd. by bulk, emulsion, and soln. polymn. of methylenephthal-
ide (II) in the presence of peroxides or $\text{BF}_3 \cdot \text{HCONMe}_2$. II was
also thermally polymd. in HCONMe_2 in air at 60° to give I of



higher mol. wt. than I obtained similarly under argon. Increas-
ing the temp. to 80° had no effect on the I yield and viscosity. I
with reduced viscosity 0.5-0.7 dl/g (0.5% HCONMe_2 , 25°) was
obtained by soln. polymn. of II in the presence of H_2O_2 or
 $(\text{NH}_4)_2\text{S}_2\text{O}_8$. Soln. polymn. of II was solvent-sensitive. I with

REEL/FRAME

19800591

AP0048827

max. reduced viscosity (0.85 dl/g) was obtained by polymn. of II in HCONMe₂ at 70° in the presence of BF₃·HCONMe₂. Increasing the reaction time raised the I yield sharply. II was also bulk copolymd. with other monomers, esp. styrene, acrylonitrile, and Me methacrylate, in the presence of Bz₂O₂ to give high yields of copolymers with high reduced viscosity. All copolymers were solids, sol. in the same solvents (CF₃CO₂H, Me₂SO, etc.) as I. I had softening point 300° and good thermal stability. DBJR

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19800592

МЗHEL'SKIY, B.I.

Satellite Communications

STABILITY OF A MULTI-STATION SATELLITE COMMUNICATIONS SYSTEM

Article by Candidate of Engineering Sciences Doctor O. V. Zhuravskiy and Graduate Student B. I. MZHEL'SKIY and Title of Content: "On the problem of ensuring the stability of a multi-station satellite communications system". Moscow, No 95, 1972, Periodic, pp 165-166

Sci JPRS 50753

9 August 1973

(2)

CAICU

The application of active repeater stations (RTR) installed in artificial Earth satellites (ESZ) opens great possibilities in the organization of communications of ground stations. The use of the Soviet communications satellite "Molniza-1" gave the opportunity to introduce the "Optical" long-range communications system into the structure of the RTR. In systems with a multi-station access the signals radiated by the transmitter (PRD) of the stations are received by the on-board antenna of the RTR, amplified, and again radiated to the Earth. The receiver (PRR) of any station if necessary may receive signals of the on-board antenna of the RTR, amplifying them to it (2, 3). The difference in the conditions of communication of interest stations with the satellite, because of the fact that they are separated by great distances, and the change of these conditions in the process of the motion of the satellite in orbit, leads to the fact that the signals arriving at the input of the repeater from various stations are strongly distinguished in magnitude, and their ratio varies in time. In the use of frequency division of signals and the general character of the RTR, as a consequence of the non-linearity of the characteristics of the RTR, a variation of the signals of individual stations occurs in it, which leads to a deterioration of the summary signal/noise ratio at the input of the receivers of the ground stations and, in the final analysis, to a decrease in the transmission capability of the system.

We may avoid the given phenomenon by means of equalizing the levels of the signals from various stations at the input of the RTR. The given problem may be solved by different methods, such as, for example, by means of organization of a system with a radio beacon in the RTR (Figure 1).

- 1 -

[1 - USSR - A]

USSR

UDC: 8.74

BYLINO, N. M., NAATS, I. E., TARUSIN, G. N.

"Concerning a Class-Scheduling Algorithm"

Izv. Tomsk. politekhn. in-ta, 1972, 223, pp 44-47 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V661)

Translation: A problem-solving algorithm is presented which was checked out in scheduling day classes at Tomsk Polytechnical Institute (1500 instructors, 600 academic groups, 500 classrooms) with a positive result.

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Miscellaneous

1

USSR

UDC 661.666:541.7

KASATOCHKIN, V. I., KAZAKOV, M. Ye., SAVRANSKIY, V. V., NABATNIKOV, A. P.,
and RADIMOV, N. P., Institute of Fossil Fuels, Moscow

"Synthesis of New Allotropic Forms of Carbon From Graphite"

Moscow, Doklady Akademii Nauk USSR, Vol 201, No 5, 1971, pp 1104-1105

Abstract: During the exposure of pyrographite platelet to a laser beam intense evaporation and melting of carbon with the formation of craters at the point of decreasing rays was observed. The results of studies on the nature of the carbon condensed from carbon vapors are given. The carbon vaporizing from the platelets of carbon was precipitated as a silvery-white layer surrounding a thin layer of black carbon precipitate. In the experiments a heterogeneous laser was used with impulse energies of 250 and 500 joules in a free generation with an impulse length 1×10^{-3} sec. The density of the silvery-white carbon was found to be 2.48 g/cm^3 . The specific electroconductivity of the carbon layer was about one ohm $\cdot \text{cm}^{-1}$. X-ray diffraction showed a polycrystalline structure for the silvery-white carbon film with an average crystal size of 10^{-5} cm . X-ray diffraction of the black carbon was characteristic of a highly dispersed material with an eroded diffraction zone. Comparison of interplanar distances for the precipitated carbon with

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USSR

KASATOCHKIN, V. I., et al., Doklady Akademii Nauk USSR, Vol 201, No 5, 1971, pp 1104-1105

those of the cubic and hexagonal modifications of diamond and hexagonal and rhombohedral graphite showed that the silvery-white carbon obtained was a new allotropic crystalline form of carbon.

2/2

- 90 -

Instruments and Equipment

USSR

UDC 615.471:[615.835.3.099.07+615.916:546.21]-07

NABATOV, Yu. A., BEREZIN, I. P., BALDIN, V. P., and ROSTOVITSEV, B. N., All Union Scientific Research Institute of Surgical Equipment and Instruments, Moscow

"An Apparatus That Signals Impending Toxicity of Oxygen"

Moscow, Meditsinskaya Tekhnika, No 4, 1971, pp 23-26

Abstract: A device that indicates when oxygen is about to become toxic during a session of hyperbaric oxygen therapy is described. The device automatically records the frequency of brain waves and appearance of "spike potentials" and acceleration of the respiratory and pulse rates after a period of relative slowing in the course of adaptation to high partial pressure of oxygen. When these physiological parameters reach certain values, the memory element is automatically triggered and a signal is sent to the system that controls oxygen pressure in the pressure chamber. The pressure is then automatically lowered to the required level. There is also an attachment for manual control of oxygen pressure.

1/1

USSR

UDC: 612.674

BEREZIN, I. P., SULTANOV, T. A., PIGAREV, V. A., and NABATOV, Yu. A., All Union Scientific Research Institute of Surgical Apparatus and Instruments, and Central Institute for Advanced Training of Physicians, Moscow

"Early Manifestations of the Toxic Effects of Hyperbaric Oxygen"

Moscow, Eksperimental'naya Khirurgiya i Anesteziologiya, No 6, Nov/Dec 70, pp 50-54

Abstract: Four stages were traced in the manifestation of the toxic effects of oxygen (3 atm) inhaled by dogs and cats: (1) slowing of the respiratory and pulse rates; (2) appearance of slow waves on the EEG, acceleration of the respiratory and pulse rates, and autonomic disturbances (pupil contraction or dilatation); (3) maximum increase in slow waves, high-amplitude discharges of acute waves, local hyperkinesia, restlessness, intensification of autonomic disturbances (salivation, pupil contraction and dilatation), and further acceleration of the respiratory and pulse rates; and (4) epileptic convulsions, continuous acute hypersynchronized discharges on the EEG, and further acceleration and onset of respiratory and pulse dysrhythmias. EEG shifts were observed in all experimental animals, whereas shifts in respiration and pulse rate prior to the convulsive

USSR

BEREZIN, I. P., et al, Eksperimental'naya Khirurgiya i Anesteziologiya, No 6, Nov/Dec 70, pp 50-54

period did not occur invariably. Hence electroencephalography would appear to be the most reliable method of detecting early signs of oxygen intoxication. The safe period for inhaling hyperbaric oxygen (3 atm) while awake was found to be 133 ± 4.6 minutes for cats and 74 ± 13.6 minutes for dogs.

WELDING

USSR

UDC 621.791.052.011:669.15-194.52+669.786+669.292

MATSNEV, E. P., Engineer, ASTAF'YEV, A. S., Candidate of Technical Sciences, STRUKOVA, N. S., Engineer (Central Scientific Research Institute for Ferrous Metallurgy imeni I. P. Bardin), CHECHERIN, YU. F., Engineer (Plant imeni Lenin), and NABATOVA, K. A., Candidate of Technical Sciences (Central Scientific Research Automobile and Auto Engine Institute)

"Properties of Welded Joints of Commercial 12G2 Steel Alloyed With Nitrogen and Vanadium"

Moscow, Svarochnoye Proizvodstvo, No 11, Nov 70, pp 27-29

Abstract: Results are presented from a study of the properties of welded joints made under conditions similar to those used for side members of motor vehicle frames from a 100-ton commercial melt of steel produced in an open hearth furnace at the Chelyabinsk Metallurgical Plant. The chemical composition of the metal was: 0.13% C, 1.19% Mn, 0.12% Cr, 0.10% Ni, 0.12% V, 0.02% N, 0.09% Cu, 0.018% S, 0.008% P. Welded joints produced
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USSR

MATSNEV, E. P., et al., Svarochnoye Proizvodstvo, No 11,
Nov 70, pp 27-29

in the sheet steel by manual arc welding were equal in strength to the base metal. The fatigue strength of the welded joints was 15-20% higher than the fatigue strength of welded joints in 30T steel.

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1/2 032 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--COLD BRITTLENESS OF STEELS USED FOR AUTOMOBILE CHASIS -U-
AUTHOR--CHECHEKIN, YU.F., ZELENova, V.O., NABATOVA, K.A., SHERMAZAN, I.V.
COUNTRY OF INFO--USSR
SOURCE--METALLOVED. TERM. OBRAB. METAL 1970, (2), 5-8
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--IMPACT STRENGTH, CRACK PROPAGATION, METAL BRITTLENESS, HOT
ROLLING, MANGANESE STEEL/(U)10G28 MANGANESE STEEL, (U)15GYUT LOW ALLOY
STEEL, (U)12G2AF LOW ALLOY STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1988/1308

STEP NO--UR/0129/70/000/002/0005/0008

CIRC ACCESSION NO--AP0106085

UNCLASSIFIED

2/2 032
CIRC ACCESSION NO--AP0106085
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--11SEP70

ABSTRACT. STEELS 12G2AF, 15GYUT, 10G2B, AND 30T WERE STUDIED UNDER 2 STRUCTURAL CONDITIONS: (1) FOLLOWING NORMALIZING AT 910DEGREES, GRAIN SIZE MARK 10-11; (2) IN THE HOT ROLLED STATE, TEMP. OF FINAL ROLLING 880-910DEGREES, GRAIN SIZE MARK 3, SIGMA EQUALS 53-6 KG-MM PRIME2. OVERALL IMPACT FUNCTIONS, TAKEN FROM THE COMPONENTS ONSET AND CRACK PROPAGATION FUNCTIONS, WERE INDEXED FOR ALL OF THE STEELS. A METHOD OF INDEXING BASED ON DETG. THE VALUE OF IMPACT STRENGTH AT TEMP. BELOW THE THRESHOLD OF COLD BRITTLENESS WAS APPLIED. THE HIGHEST ONSET AND CRACK PROPAGATION FUNCTIONS WERE OBSD. IN STEELS 12G2AF AND 15GYUT. ELECTRON MICROSCOPIC ANAL. DETD. NOT ONLY THE COLD BRITTLENESS THRESHOLD BUT ALSO THE PECULIAR FINE STRUCTURE OF THE FRACTURE. A MICROFRACTOGRAPH OF THE VISCOUS FRACTURE OF STEEL 12G2AF IN THE HOT ROLLED AND IN THE NORMALIZED STATES IS SHOWN. IN THE AREA OF DUCTILE FRACTURE, A DIFFERENT DISPERSION OF THE CUP SHAPED STRUCTURE WITH DEPENDENCE ON HEAT TREATMENT WAS OBSD. STEELS IN THE NORMALIZED STATE DISPLAYED MORE DISPERSION OF THE CUP SHAPE STRUCTURE THAN IN THE HOT ROLLED AND ANNEALED STATE.

UNCLASSIFIED

USSR

UDC: 51:621.391

NABEBIN, A. A.

"On a Certain Elementary Theory Which Describes Finite Automata"

Mat. zap. Krasnoyarsk. gos. ped. in-t (Mathematical Notes of the Krasnoyarsk State Pedagogical Institute), 1970, vyp. 3, pp 54-60 (from RZh-Kibernetika, No 1, Jan 71, Abstract No 1V333)

Translation: Let $A = \{a_1, \dots, a_m\}$, $m \geq 2$ be an alphabet, and let S be the set of all words in alphabet A . The following predicates are defined on S : $x \rightarrow y$ -- word x is the initial segment of word y ; $k_i(x)$, $i = 1, \dots, m$ -- the word x is terminated at the right by the letter a_i ; $l(x, y)$ -- the words x and y are of identical length. An elementary theory is considered for continued terminating fractions of these predicates. It is proved that the class of predicates defined in terminating continued fractions coincides with the class of predicates computed by finite automata. G. Blokhina.

1/1

USSR

UDC: 51.621.391

NABEBIN, A. A.

"On Axiomatizing an Elementary Theory Which Describes Automata"

Mat. zap. Krasnoyarsk. gos. ped. in-t (Mathematical Notes of the Krasnoyarsk State Pedagogical Institute), 1970, vyp.3, pp 61-66 (from RZh-Kibernetika, No 1, Jan 71, Abstract No 1V336)

Translation: A narrow calculus of predicates is taken as the basis for constructing an axiomatic calculus whose formulas describe finite automata in some natural interpretation.

UDC: 532

USSR

NABERUKHIN, Yu. I.

"Some Considerations on the Structure of Water"

V sb. Svobodnoradikal'n. sostoyaniya v khimii (Free-Radical States in Chemistry--collection of works), Novosibirsk, "Nauka", 1972, pp 224-235 (from RZh-Fizika, No 6, Jun 72, Abstract No 6Ye92)

Translation: This is a critical survey of modern concepts on the structure of water. The problems of monomers, cavities, and globules are studied in the greatest detail. The author concludes from examination of considerable experimental material that the concentration of monomeric molecules in water is vanishingly small. In the author's opinion, the problem of describing cavities in the structure of water, and that of rigidly bound aggregates of molecules -- globules -- are a long way from completion.

1/1

- 63 -

1/2 015 UNCLASSIFIED
TITLE--MANUFACTURE OF GALVANIC CELLS -U-

PROCESSING DATE--16OCT70

AUTHOR--(05)-NABIULIN, F.K., BUZOVA, Z.M., GERTYK, E.M., MARFIN, B.V.,
RABINOVICH, V.A.
COUNTRY OF INFO--USSR

SOURCE--U.S. 3,506,750

DATE PUBLISHED--14APR70

SUBJECT AREAS--ENERGY CONVERSION (NON-PROPULSIVE)

TOPIC TAGS--PATENT, GEL, BATTERY ELECTROLYTE, BATTERY ELECTRODE,
ELECTROLYTIC CELL, VALVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1990/1798

STEP NO--US/0000/70/000/000/0000/0000

CIRC ACCESSION NO--AA0109759

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--16OCT70

2/2 015

CIRC ACCESSION NO--AA0109759

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. PREGELLED ELECTROLYTE AND NEG. ELECTRODE MATERIAL ARE SIMULTANEOUSLY PRESSED THROUGH A FUNNEL SHAPED FEEDER INTO THE POS. ELECTRODE VESSEL BY A PISTON AND VALVE ARRANGEMENT. AT THE SAME TIME, A CURRENT COLLECTOR IS FED THROUGH THE CENTRAL PORTION OF THE FEEDER. BY MOLDING THE ION CONDUCTING DIAGRAM AND THE NEG. ELECTRODE IN THE CELL CASING, INTERNAL SHORTING BETWEEN THE CELL ELECTRODES IS ELIMINATED.

UNCLASSIFIED

EQUIPMENT
Gyroscopic

USSR

NABIULLIN, M. K., Kazan'

"Stability of Stationary Movements of a Gyrostat in the Force Field of Two Stationary Centers"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Tverdogo Tela, No 1, January-February 1971, pp 156-164

Abstract: In this article the stationary movements of a dynamically symmetrical gyrostat in the force field of two stationary centers are found using the Raus-Lyapunov theorem and the method of its application to the problems of solid state dynamics proposed by P. A. Kuz'min. The sufficient conditions of the stability of these motions with respect to certain values are also obtained.

It is demonstrated that on conversion to one attracting center the results obtained and the conditions of their stability contain earlier results found for symmetrical satellites (a body or a free gyrostat). The stability of the relative equilibrium of a solid state with a cavity completely filled with a uniform incompressible viscous fluid was studied by V. N. Rubanovskiy in the field of two stationary attracting centers and in the Earth's normal gravitational field. The present study is patterned after his model.

1/1

USSR

UDC 621.383.2(088.8)

NABIULLIN, F. KH.

"Photoelectric Battery"

USSR Author's Certificate No 275249, filed 9 Apr 63, published 22 Oct 70 (from RZh-Elektrotehnika i Energetika, No 5, May 1971, Abstract No 5A177P)

Translation: A photoelectric battery made of flat semiconductor photocells connected into sections is introduced. The battery is distinguished by the fact that in order to improve the reliability and elasticity of the battery and to provide for the possibility of installing it in nonrigid panels, the cells are attached on the nonoperating (back) side to a metal substrate (grid) serving simultaneously as one of the current taps so that they form separate modules connected into the battery. The taps on the operating side of the cells are executed in the form of narrow strips arranged parallel to the sides of the cells. There are 3 illustrations.

1/1

1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--GALVANIC CELL MANUFACTURE BY EXTRUSION -U-
AUTHOR--(05)-NABIULLIN, F.K., BUZOVA, Z.M., GERTSYK, E.M., MARFIN, S.V.,
RABINOVICH, V.A.
COUNTRY OF INFO--USSR
SOURCE--BRIT. 1,190,586
DATE PUBLISHED--06MAY70

SUBJECT AREAS--ENERGY CONVERSION (NON-PROPULSIVE)

TOPIC TAGS--ELECTROLYTIC CELL, MANUFACTURING METHOD, EQUIPMENT EXTRUSION,
ELECTRODE, ELECTROLYTE, PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/1072

STEP NO--UK/0000/70/000/000/0000/0000

CIRC ACCESSION NO--AA0131619

UNCLASSIFIED

2/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AA0131619
ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. A PROCESS IS DESCRIBED FOR FILLING
CELLS, HAVING A CENTRAL CURRENT COLLECTOR, BY THE EXTRUSION OF ELECTRODE
ACTIVE MATERIAL AND GEL ELECTROLYTE THROUGH COAXIAL NOZZLES.

UNCLASSIFIED

USSR

UDC 531.36

NABIULLIN, M. K., Kazan'

"On the Stability of the Steady-State Motion of a Free Gyrostat in Axisymmetric Gravitational Fields"

Moscow, Mekhanika tverdogo tela, No. 2, Mar/Apr 72, pp 17-26

Abstract: The Routh-Lyapunov theorem and a method for applying it to problems in the dynamics of a solid proposed by Kuz'man are used to derive the steady-state motion of an asymmetrical gyrostat in axisymmetric gravitational fields. Stability conditions with respect to the quantities ϕ_1 , r , z , Ω_1 , Ω_2 , Ω_3 , r , z , ψ , ϕ and θ are used to derive the stationary motion of a nonsymmetric gyrostat in axisymmetric gravitational force fields. Stability relative to the equilibrium of the solid in a Newtonian central force field is discussed in a general formulation of the problem as an example. The stability of steady-state motion of a solid and a gyrostat in a Newtonian central force field and stability conditions for circular orbits of a solid point in a force field were studied in previous papers in a more general form, but the solutions obtained in this paper and the conditions for their stability generalize these earlier results.

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USSR

UDC 542.91+541.6:547.431.2'118.3

MAKAROVA, N. A., NABIULLIN, V. N., MUKMENOV, E. T., and ARBUZOV, B. A.,
Institute of Organic and Physical Chemistry imeni A. Ye. Arbuzov, Academy of
Sciences USSR

"The Behavior of 2-Ethoxy-4-chloromethyl-1,3,2-dioxaphospholane on Heating"

Leningrad, Zhurnal Obshchey Khimii, Vol 43, No 11, Nov 73, pp 2373-2378

Abstract: Re-esterification of triethyl phosphite with 1-chloro-1-deoxy-D,L-glycerol (I) led to the formation of 2-ethoxy-4-chloromethyl-1,3,2-dioxaphospholane (II). Study by the methods of gas-liquid chromatography and ^{31}P nuclear magnetic resonance showed that the cyclic phosphite II consisted of a mixture of a cis- and a trans-isomer with boiling points that were close to each other. The trans-isomer predominated in the mixture. On heating of II for 6 hrs at $175-90^\circ$, EtCl was evolved and a P-containing oligomer formed, apparently as a result of an inter-molecular Arbuzov rearrangement. II was also prepared by reacting I with ethyl dichlorophosphite EtOPCl_2 in the presence of NEt_3 . Similarly, the 2-beta-chloroethoxy and 2-isobutoxy analogs of II (III and IV) were synthesized by the reaction of I with $\text{ClCH}_2\text{CH}_2\text{OPCl}_2$ and $i\text{-BuOPCl}_2$, respectively. The 2-phenoxy analog (V) of II was also prepared. The behavior and properties of compounds III-V, including the predominance of the trans-isomer

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USSR

MAKAROVA, N. A., et al., Zhurnal Obshchey Khimii, Vol 43, No 11, Nov 73,
pp 2373-2378

in them, were consistent with the assumption of an intermolecular rearrangement.
The authors thank V. V. Pomazanov, N. P. Anoshina, and E. I. Gol'dfarb for
carrying out instrument measurements.

2/2

1/2 022 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--ACCELERATED PHOTOMETRIC DETERMINATION OF CHROMIUM IN METALLIC TIN
-U-
AUTHOR--(03)-PILIPENKO, A.T., VORONINA, A.I., NABIVANETS, B.I.
COUNTRY OF INFO--USSR
SOURCE--ZAVOD. LAB., 1970, 36, (3), 273
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--PHOTOMETRIC ANALYSIS, TIN, CHROMIUM, AMMONIUM SULFATE, TIN
CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/0904

STEP NO--UR/0032/70/036/003/0273/0273

CIRC ACCESSION NO--AP0131490

UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0131490

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN IMPROVED RAPID METHOD OF DETERMINING CR IN METALLIC SN BY PHOTOMETRIC ANALYSIS IS DESCRIBED. THE CR IS CONVERTED INTO A HEXAVALENT STATE BY MEANS OF NH SUB4 PERSULPHATE IN AN ALKALINE MEDIUM; THERE IS THEN NO NEED TO EFFECT PRELIMINARY SEPARATION OF THE SN IN THE FORM OF SNCL SUB4 AS IN EXISTING METHODS. THE SENSITIVITY OF THE METHOD FOR A 0.25 G SAMPLE IS 4 TIMES 10 PRIME NEGATIVE 4 PERCENT CR. A TYPICAL ANALYSIS TAKES 1 H, AND THE RELATIVE ERROR AVERAGES 5 PERCENT.

UNCLASSIFIED

1/2 020 UNCLASSIFIED PROCESSING DATE--30UCT70
TITLE--CONSTRUCTING A CODE CONVERTER FOR MECHANICAL MOVEMENT WITH FIXED
CODING MASKS -U-
AUTHOR-(03)-NABIYEV, I.A., RUSTAMOV, N.S., AKHMEDOV, R.M.
COUNTRY OF INFO--USSR
SOURCE--NOVOCHERKASSK, 12VESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY:
ELEKTROMEKHANIKA, NO 2, 1970, PP 157-164
DATE PUBLISHED--70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--CODE CONVERTER, MECHANICAL MOTION INSTRUMENT, MAGNETIC
CIRCUIT, MAGNETODIELECTRICS, TRANSISTORIZED CIRCUIT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1999/1676

STEP NO--UR/0144/70/000/002/0157/0164

CIRC ACCESSION NO--AT0123501

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--ATO123501

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS STUDY PROBLEMS ASSOCIATED WITH THE CONSTRUCTION OF CODE CONVERTERS FOR MECHANICAL MOVEMENT. THE METALLIC INDICATOR OF THE PRIMARY METER OF THE TECHNOLOGICAL PARAMETERS IS USED AS THE DRIVING ELEMENT WHILE A FIXED, ATTACHED, CODING MASK IS USED AS THE SENSING ELEMENT. THE MASK CONSISTS OF AN INSULATING PLATE WITH INDUCTANCE COILS WITH A MAGNETIC CIRCUIT MADE FROM A ROD TYPE MAGNETODIELECTRIC. THESE ARE LOCATED WITH RESPECT TO THE SCALE OF A GIVEN CODE. THE INDUCTANCE COILS ARE GROUPED ACCORDING TO THE NUMBER OF CODE DIGITS AND ARE THUSWISE CONNECTED TO THE OSCILLATION CIRCUITS OF TRANSISTOR TYPE, IC, AUTOGENERATORS OPERATING UNDER CONDITIONS OF GENERATING CURRENT CUT OFF DURING INTRODUCTION OF BODIES INTO THE ELECTROMAGNETIC FIELD OF THE COILS MENTIONED ABOVE. SCHEMES ARE PRESENTED FOR CODING MASKS WITH VARIOUS CODE SCALES. METHODOLOGY FOR THEIR CONSTRUCTION IS GIVEN AND STUDY RESULTS PRESENTED. THESE MAKE IT POSSIBLE TO RAISE THE DISCRIMINATION AND SIMPLIFY THE DESIGN OF THESE MASKS.

UNCLASSIFIED

USSR

UDC 543.242.3:546.655

MAMEDOV, I. A., and NABIYEV, M. N., Department of Analytical Chemistry, Azerbaydzhan Institute of Petroleum and Chemistry imeni M. Azizbekov

"Arsenate-Iodometric Determination of Cerium (IV) and Aluminum When Present Together"

Ivanovo, Izvestiya Vysshikh Uchebnykh Zavedeniy, Khimiya i Khimicheskaya Tekhnologiya, Vol 13, No 12, 1970, pp 1718-1719

Abstract: A procedure for arsenate-iodometric determination of cerium (IV) and aluminum, when present together, is described. The procedure is reduced to precipitating these metals as their arsenates, subsequent dissolution of the precipitates in strong acid, and iodometric titration of the liberated arsenous acid by sodium thiosulfate solution in the presence of benzene. The analysis takes 30-35 minutes and is fairly accurate. Two variants of determinations are described, and analytical data are given for a wide range of concentrations.

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- 14 -

1/2 012
UNCLASSIFIED
PROCESSING DATE--04DEC70
TITLE--RATE OF THE PHOSPHORIC ACID DECOMPOSITION OF MAGNESIUM CONTAINING
PHOSPHORITES -U-
AUTHOR--(03)-NABIYEV, M.N., VISHNYAKOVA, A.A., ZDUKOS, A.T.
COUNTRY OF INFO--USSR
SOURCE--UZB. KHIM. ZH. 1970, 14(2), 7-8
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--PHOSPHATE, PHOSPHORIC ACID, CHEMICAL DECOMPOSITION, ROCK,
MAGNESIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3008/0321

STEP NO--UR/0291/70/014/002/0007/0008

CIRC ACCESSION NO--AP0137426

UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0137426

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BETTER UTILIZATION OF THE RAW MATERIAL IN THE PRODUCTION OF DOUBLE SUPERPHOSPHATE BY TREATMENT OF MG CONTG. PHOSPHATE ROCK CONCS. WITH H SUB3 PO SUB4 WAS STUDIED TO TRY TO ENHANCE THE RATE OF DECOMPN. UNDER MANUFG. CONDITIONS THE DECOMPN. OF THE MG CONTG. SECONDARY PHOSPHATE WAS SMALLER THAN 70PERCENT AND THE REACTION RATE WAS NEGLIGIBLY TIME DEPENDENT. EQUIL. DECOMPN. IS ACHIEVED IN 2-5 MIN AND THEN THE PROCESS IS RAPIDLY SLOWED BY REACTION PRODUCTS FORMING, PROBABLY IMPENETRABLE FILMS ON THE PHOSPHATE GRAINS. THE DESIRED INTENSIFICATION OF DECOMPN. CAN BE ACCOMPLISHED BY AN INCREASE OF THE LIQ. TO SOLID PHASE RATIO WHICH, HOWEVER, ALTERS THE PRODUCTION SCHEME IN PRINCIPLE. THEREFORE, INTRODUCTION OF NO SUB3 PRIME NEGATIVE INTO THE SYSTEM IS PREFERABLE FOR PROMOTING OF THE PROCESS RATE.

FACILITY: INST. KHIM., TASHKNET, USSR.

UNCLASSIFIED

USSR

UDC 541.64:547.379

FAYZULLIN, I. N., MAKSUDOVA, T. M., SHAGIAKHMETOV, E. M., and NABIYEVA, D. I.

"Polysulfones of Phosphoric Acid Allyl Esters"

Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 15, No 11, Nov 73, pp 2424-2428

Abstract: Reacting sulfur dioxide with allyl alkyl methylphosphonates and allyl aryl β -chloroethylphosphonates yields phosphorus containing polysulfones. Specific reaction temperatures were determined. The effect of the structure of phosphonate esters on the reaction temperature of the formation of polysulfones has been investigated, showing that branching in the chains of the starting monomers leads to lower specific temperature. The only exception noted was that of allyl aryl esters of chloroalkylphosphonic acid. Changing the position of a substituent in the aromatic ring showed no substantive effect on the value of specific temperature.

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USSR

UDC: 678.03:547.558.1

FAYZULLIN, I. N., MAKUDOVA, T. M., NABIYEVA, D. I., and KUZNETSOV, YE. V.

"Synthesis of Diallyl Ethers of Arylphosphoric Acids"

Moscow, Plasticheskiye Massy, No 10, 1970, pp 16-17

Abstract: The synthesis was carried out in two stages. First phosphorus oxychloride was reacted with substituted phenols to yield phenylphosphoric acyl dichlorides. Next these dichlorides were condensed with allyl alcohol. The acyldichlorides were obtained at refluxing temperature, with continuous stirring. The temperature was elevated to 150°C after 4 hrs and kept there for one hour. A double distillation gave final products in 54-63% yield. Next step was carried out by mixing the dichlorides with allyl alcohol and pyridine at 0°C. The reaction was carried out at the refluxing temperature. A triple redistillation gave the products in 18-54% yield -- colorless or yellowish liquids rapidly darkening on storage in light; they were soluble in many organic solvents.

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- 52 -

1/2 017 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--DETERMINATION OF MOLYBDENUM AND ZINC IN FERTILIZERS AND PHOSPHATE
RAW MATERIAL -U-
AUTHOR--(03)-NABIYEVA, M.M., KHAKIMOVA, V.K., AULESHEVA, M.
COUNTRY OF INFO--USSR
SOURCE--UZB. KHIM. ZH. 1970, 14(1), 6-7
DATE PUBLISHED-----70
SUBJECT AREAS--AGRICULTURE, CHEMISTRY
TOPIC TAGS--FERTILIZER, CHEMICAL ANALYSIS, MOLYBDENUM, POLAROGRAPHIC
ANALYSIS, ZINC, COLORIMETRY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3008/0005 STEP NO--UR/0291/70/014/001/0006/0007
CIRC ACCESSION NO--AP0137204
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--27NOV76

CIRC ACCESSION NO--AP0137204

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONTENT OF MO IN FERTILIZERS WAS DETD. POLAROGRAPHICALLY, AFTER REMOVING THE INTERFERING ELEMENTS FR, IN, V, ETC., BY TREATING THE SAMPLES WITH MINERAL ACIDS AND IONEX COLUMNS. ZN WAS DETD. COLORIMETRICALLY. VARIOUS FERTILIZERS CONTAINED 0.04-1.04 TIMES 10 PRIME NEGATIVE3 PERCENT MO AND 0.5-6.0 TIMES 10 PRIME NEGATIVE3 PERCENT ZN. FACILITY: INST. KHIM., TASHKENT, USSR.

UNCLASSIFIED

USSR

UDC 621.317.77 5

MISYURA, V. A., PIVEN', L. A., SURKOV, A. K., SOMOV, V. G.,
KARATEYEV, N. G., ZAGVOZDEIN, B. V., NABOKA, A. M., LITVINENKO,
O. A., and KAPANIN, I. I.

"Systems of Phase and Doppler Measurements in a Mobile Radio
Ionosphere Complex"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl.
Sekts. 3 (Tenth All-Union Conference on the Propagation of Radio
Waves; Report Theses; Section 3--collection of works) "Nauka,"
1972, pp 109-113 (from RZh--Radiotekhnika, No 10, 1972, Abstract
No 10A426)

Translation: A device for phase probing and a system for recording
the Faraday and Doppler effects in artificial earth satellite sig-
nals and rockets, including a series of multichannel receiver and
recorder devices operating at two, three, and four coherent fre-
quencies (20, 40; 24, 48, 144; 20, 30, 90, 180; 150 and 400 MHz,
and others), are described. The difference between the phase
probing system and those now known is the separation of the mea-
sured phase differences with a heterodyne frequency and consequent
narrow-band filtration. Resume
1/1

USSR

UDC 621.317.08 3

MISYURA, V. A., PIVEN', L. A., LITVINENKO, O. A., SOMOV, V. G.,
NABOKA, A. M., SURKOV, A. K., and KARATEYEV, N. G.

"Mobile Radio Ionosphere Complex for Investigating the Ionosphere
and Radio Wave Propagation"

Moscow, V sb. X Vses. konf. po rasprostr. radiovoln. Tezisy dokl.
Sekts. 3 (Tenth All-Union Conference on the Propagation of Radio
Waves; Report Theses; Section 3--collection of works) "Nauka,"
1972, pp 104-108 (from RZh--Radiotekhnika, No 10, 1972, Abstract
No 10A427)

Translation: A mobile radio ionosphere complex, developed in the
Khar'kov University for complex investigations of the ionosphere
and the propagation of radio waves by the method of vertical prob-
ing and the method of single-frequency and multifrequency differen-
tial Doppler and Faraday effects in satellite and rocket signals,
is described. The mobility of the complex permits, in addition to
conducting independent measurements, combination measurements with
devices for noncoherent scattering and with experiments using geo-
physical and meteorological rockets, as well as various shortwave
ranges and the like. Resume

1/1

Thin Films

UDC 546.48'22:539.238

USSR

PALATNIK, L. S., NABOKA, M. N., and MARINCHEVA, V. YE., Khar'kov Polytechnical Institute imeni V. I. Lenin

"Influence of Production Conditions on Crystalline Quality of CdS Films"

Moscow, Neorganicheskiye Materialy, Vol 6, No 8, Aug 70, pp 1526-1527

Abstract: Electronography, X-ray diffractometry, and optical spectrometry are used to study the influence of the molecular composition of the gaseous m_i phase, rate of condensation ω , substrate temperature t_{sub} , and condensation angle ϕ on the structure and optical properties of thin condensed CdS layers. The results indicate that of all the parameters, ω , m_i , and ϕ , the rate of precipitation has the greatest influence on the crystalline quality during formation of condensed CdS layers, controlling the content of excess cadmium atoms or sulfur vacancies.

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USSR

UDC: 546.22:539.238

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USSR

"The Directed Growth of Thin Sulfur Films"

Moscow, Neorganicheskiye Materialy, Vol 6, No 3, 1970, pp 409-413

Abstract: A method is suggested for reducing the critical thickness and condensing of thin sulfur films from vapor directly to crystalline film at room temperature. The substrates consisted of thin polystyrene films containing sulfur seeds. The microstructure of the vacuum condensate applied to the polystyrene seeded substrate was found to be highly sensitive to the initial seed concentration. The film, at thicknesses up to 20 μ , produced by concentration on a thin (about 0.1 μ) strengthening and orienting substrate was comparatively easily removed from the glass plates by submersion in distilled water. The method provides high mechanical film strength with room temperature condensation. The optimal sulfur concentration in the polystyrene substrate layer was found to be 15.8%, which produced seed crystals about 0.1 μ in diameter

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Moscow, Neorganicheskiye Materialy, Vol 6, No 3, 1970, pp 409-413

having strong orienting influence on the growth of the sulfur films during the course of vacuum condensation. Consequently, the mechanism of formation of the vacuum condensate can be influenced by changing the concentration of seeds in the polystyrene substrate, as by changing the substrate temperature. Introduction of the seeds to the substrate causes an effect equivalent to decreasing the substrate temperature by several dozens of degrees. Vibration tests at 3 to 12 g (gravity force) showed the films to be comparatively strong in resistance to vibration both along the film and perpendicular to it. No ruptures or cracks were observed in the film after the test.

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1/3 021 UNCLASSIFIED PROCESSING DATE--090CT70
TITLE--DIRECTED GROWTH OF THIN SULFUR FILMS -U-
AUTHOR--(03)-PALATNIK, L.S., NABOKA, M.N., NECHITAID, A.A.
COUNTRY OF INFO--USSR N
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 409-13
DATE PUBLISHED-----70
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TOPIC TAGS--SULFUR, POLYSTYRENE RESIN, CRYSTAL STRUCTURE, MECHANICAL
STRENGTH
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/1928 STEP NO--UR/0363/70/006/003/0409/0413
CIRC ACCESSION NO--AP0115741

UNCLASSIFIED

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PROCESSING DATE--09OCT70

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CIRC ACCESSION NO--AP0115741

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A METHOD IS PROPOSED FOR THE PREPN. OF THIN CONDENSED COMPACT THIN FILMS OF S ON A POLYSTYRENE SUBSTRATE WITH A SEED ENHANCING HIGH MECH. STRENGTH OF THE FILM AT ROOM TEMP. OF CONDENSATION. THE INFLUENCE OF THE CONCN. OF THE S SEED IN THE POLYSTYRENE FILM SUBSTRATE ON THE FORMATION OF THE STRUCTURE OF CONDENSED S THIN FILMS WAS STUDIED. THE MICROSTRUCTURE OF THE VACUUM CONDENSATE APPLIED AT ROOM TEMP. TO THE POLYSTYRENE SUBSTRATE WITH THE SEED TURNED WAS VERY SENSITIVE TO THE INITIAL CONCN. OF THE SEED. BELOW A CERTAIN CRIT. CONCN. OF THE SEED (C SUBK PRIMES IS SMALLER THAN 15.8), THE MICROSTRUCTURE OF THE VACUUM CONDENSATE NO LONGER DEPENDS ON THE C PRIMES. AT C PRIMES IS SMALLER THAN C SUBK PRIMES THE S CONDENSATE HAS A GLOBULAR STRUCTURE. VACUUM CONDENSATES OF S PREPD. ON A POLYSTYRENE SUBSTRATE AT C PRIMES EQUALS 15.8-28.5 HAVE A COARSE CRYST. STRUCTURE. THE CRYST. SEEDS AT C PRIMES IS SMALLER THAN 15.8 ARE FLAT SINGLE CRYSTALS. THE THIN FILM PREPD. BY VACUUM DEPOSITION ON A THIN SUBSTRATE CAN BE RELATIVELY EASILY REMOVED FROM THE GLASS PLATELET BY IMMERGING IT IN DISTD. WATER. THE OPTIMUM CONCN. OF S IN THE POLYSTYRENE FILM SUBSTRATE WAS C PRIMES EQUALS 15.8PERCENT, AT WHICH CRYST. SEEDS MEASURING IS SIMILIAR TO 0.1 MU IN SIZE EMERGE, AND WHICH HAVE A STRONG ORIENTATION EFFECT ON THE GROWTH OF S THIN FILMS DURING VACUUM CONDENSATION. IN CONTRAST TO SIMILAR FILMS PREPD. BY OTHER METHODS, THE FILMS PREPD. BY THE DIRECTED GROWTH METHOD DESCRIBED HEREIN HAVE GOOD MECH. STRENGTH RELATIVE TO VIBRATION BOTH ALONG THE FILM AND IN THE PERPENDICULAR DIRECTION.

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ABSTRACT/EXTRACT--NO CRACKS OR FISSURES WERE OBSD. IN SUCH THIN FILMS AT
GIVEN VIBRATION FREQUENCIES AND LOADS. FACILITY: KHAR'KOV,
POLITEKH. INST. IM. LENINA, KHARKOV, USSR.

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UDC 621.43.04:629.113

NABOKIKH, V. A., Scientific Research Institute of Automobile Instruments

"The Influence of Thyristor Systems of Ignition on the Function of Engine Carburetors"

Moscow, Avtomobil'naya Promyshlennost', No 3, 1973, pp 16-17

Abstract: Experimental data on the thyristor (condenser) system of electronic ignition show that in regimes of partial loading, corresponding to a choke opening of 25 or 50%, in transitional regimes of engine function, these systems possess better combustible qualities than classic or transistor systems of ignition. The three were compared with respect to the dependence of the angle of ignition advance on the speed of crankshaft rotation, the development of torque, the size of the sparkplug gap necessary and fuel economy under road conditions. However due to the short spark duration the thyristor system impairs engine power and economic factors.

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Biophysics

USSR

UDC 575.125-577.372.13.099

SHAKHBAZOV, V. G., KOTENKO, L. V., KOPEYKA, Ye. F., and NABOKOV, A. L., Khar'kov State University

"Changes in the Bioelectric Rest Potentials of Cells of Different Genotypes Under the Influence of High Temperatures"

Kiev, Tsitologiya i Genetika, Vol 4, No 4, Jul/Aug 70, pp 352-355

Abstract: It was previously established by the authors that there is a relationship between genetic differences in hybrid and inbred organisms and the bioelectric properties of their cells. It was also found that heterosis hybrid forms exhibited an increased resistance to the effects of high temperatures. In the present study, the effects of temperatures in the 40-50°C range on the cellular and surface bioelectric rest potentials (BERP) of hybrid and inbred corn seedlings were studied. After exposure of the seedlings to such temperatures for 10-20 min, the negative values of cellular and surface BERP decreased on the average from -80 to -20 mV and from -50 to +10 mV, respectively. The BERP values changed less for hybrids than for inbred plants, a fact which confirms the greater resistance of hybrids to high temperatures.

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USSR

UDC 615.37:616.988-02

GORSHUNOVA, L. P., NABOKOVA, A. V., Institute of Virology imeni Ivanovskiy,
Academy of Medical Sciences USSR, Moscow

"Changes in Sensitivity of the Organism to Heterologous Viral Infections After Immunization by Various Virus Vaccines. Report I. The Capacity of Live Poliovaccine and Vaccine Against Tickborne Encephalitis to Generate Resistance to Heterologous Viral Infections"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 47, No 6,
Jun 70, pp 83-86

Abstract: In recent years, it has been established that vaccination enhances the sensitivity of the organism to various infections and toxic agents. White mice and rats were used in experiments to establish the extent to which live poliovaccine enhances antiviral resistance. After intramuscular vaccination, the test animals were infected with tickborne encephalitis virus or rabies virus. In the first test series, it was established that seven days after vaccination, the resistance of animals to tickborne encephalitis virus was increased. The death rate of mice in this series was 20% whereas that of control animals was 45%. Resistance increased up to the 20th day; by the 30th day resistance decreased and was almost at the initial level. The resistance to rabies was still high in white mice and rats for 45-60 days after injection of poliovaccine. The mortality rate was nine times
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GORSHUNOVA, L. P. and NABOKOVA, A. V., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, Vol 47, No 6, Jun 70, pp 83-86

lower than that of controls. By the 90th day, resistance dropped somewhat, but was still considerably higher than that of unvaccinated animals. In a third test series, it was shown that immunization of white mice with inactivated vaccine against tickborne encephalitis in combination with live poliovaccine increased the resistance to rabies. This was observed for the 15th through the 60th day after vaccination. The rabies mortality of animals vaccinated against tickborne encephalitis was 2-4 times lower than that of controls. The data obtained show that immunization by live poliovaccine and inactivated vaccine against tickborne encephalitis enhances the resistance of the organism to heterologous viral infections. The level and duration of this resistance are determined by the properties of the vaccine preparation used, and by the features of the particular heterologous virus infection.

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TITLE--CHANGES OF SENSITIVITY OF THE ORGANISM TO HETEROLOGOUS VIRAL
INFECTIONS FOLLOWING IMMUNIZATION WITH VARIOUS VIRAL VACCINES. THE
AUTHOR--(02)-GORSHUNOVA, L.P., NABOKOVA, A.V. *N*

COUNTRY OF INFO--USSR

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SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--POLIOMYELITIS, VACCINE, RABIES, IMMUNOLOGY, TICKBORNE
ENCEPHALITIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
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2/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0126173
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SINGLE INTRAMUSCULAR INJECTION OF
LIVING POLIOVACCINE OF P TYPE CAUSED THE STATE OF PROLONGED (FOR TWO AND
A HALF MONTHS) RESISTANCE TO RABIES, AND ONLY A SHORT LIVED (FOR TWO
WEEKS) ELEVATION OF RESISTANCE TO THE VIRUS OF TICK BORNE ENCEPHALITIS.
RABIES RESISTANCE ALSO DEVELOPED FROM THE 15TH TO THE 60TH DAY AFTER A
SINGLE SUBCUTANEOUS INJECTION OF INACTIVATED VACCINE AGAINST TICK BORNE
ENCEPHALITIS. FACILITY: INSTITUT VIRUSOLOGII IM IVANOVSKOGO AMN
SSSR, MOSKVA,

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